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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,808	06/10/2006	Lisbeth Kalum	10437.204-US	8849

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EXAMINER	
BADR, HAMID R	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
04/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/580,808	KALUM ET AL.	
	Examiner	Art Unit	
	HAMID R. BADR	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/25/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 6 is indefinite for "effective amount of a starch degrading enzyme". It is not clear what is meant by "effective amount", nor for what it is to be "effective". It is not clear what the applicants regard as the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 6-7, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita (US 5,312,631; hereinafter R1) in view of Mohwinkel (US 3,658,559; hereinafter R2).

6. R1 discloses a method for preventing cut pieces of agricultural products containing starch, particularly potatoes from sticking to each other. (Abstract)

7. R1 discloses that if cut pieces of an agricultural product containing much starch such as potatoes are immersed in an aqueous solution of at least one of the α-amylase,

β-amylase, glucoamylase, and other kinds of amylolytic enzymes and cooked with no danger of sticking to each other. (Col. 2, lines 25-34). Given that potato pieces are cut, it is obvious to remove the peels from potatoes.

8. R1 teaches of blanching the cut pieces in hot water of 50C to 100C to gelatinize the starch existing on the surface. (Col. 2, lines 51-52).

9. R1 is silent regarding the vacuum packing of potatoes.

10. R2 discloses a process for vacuum-packing of potatoes wherein the peeled, raw and if required sliced or diced potatoes are vacuum-packed and cooked. (Abstract).

11. R1 discloses the treatment of potatoes with starch degrading enzymes in order to prevent their subsequent sticking of pieces together. R2 teaches how to vacuum pack and heat treat the packaged material. Therefore, it would have been obvious to one of ordinary skill in the art to treat the potato product with a starch degrading enzyme and vacuum-pack and heat treat the product for preservation purposes expecting to find non-sticking pieces upon opening the package after storage. Absent any evidence to contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success in treating the potato product with a starch degrading enzyme and finding non-sticking pieces upon opening the vacuum-packed product.

12. Claims 8-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita (US 5,312,631; hereinafter R1) and Mohwinkel (US 3,658,559; hereinafter R2), further in view of Scharp (US 6,051,220; hereinafter R3).

13. R1 and R2 are silent regarding the source of α-amylase.

14. R3 discloses sources of fungal α-amylase including *Aspergillus niger*. (Abstract)

15. The characteristics and the pH optimum of fungal amylases are known in the art. Since fungal amylases are active in an acidic range of pH, selection of such an amylase will help hydrolyze starch when low pH environments are encountered.

16. Therefore, it would have been obvious to one of ordinary skill in the art to choose a fungal amylase for the treatment of potato products to prevent their subsequent sticking together. One would choose a fungal amylase to process potatoes at the lower end of the pH spectrum.

17. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita (US 5,312,631; hereinafter R1) and Mohwinkel (US 3,658,559; hereinafter R2), further in view of Ellertsen et al. (US 4,519,934; hereinafter R4).

18. R1 and R2 are silent regarding the source of α-amylase.

19. R4 discloses sources of amylase form *Bacillus licheniformis*. (Abstract)

20. Bacterial α-amylases are known in the art. They are characterized by being more heat stable and having pH optima at pH 6-9. Given these characteristics, it would have been obvious to those of skill in the art, to choose a bacterial source of enzyme to be able to process the potatoes at higher temperatures and higher pH values.

21. R1 and R2 disclose the enzymatic treatment of potatoes and vacuum packing of the product resulting in non-sticking potato pieces. R3 and R4 discloses fungal and bacterial sources of amylases. Therefore it would have been obvious to those of skill in the art to treat the potato pieces with either a fungal amylase or a bacterial amylase,

vacuum pack and cook the product and expect to find non-sticking pieces upon opening the vacuum packed potato product. Absent any evidence to contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success in vacuum packing of amylase treated potato pieces.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr
Examiner
Art Unit 1794

/KEITH D. HENDRICKS/
Supervisory Patent Examiner, Art Unit 1794